

NWS FORM E-5

(11-88)

(PRES. by NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)

WFO Jackson, Mississippi

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:

MONTH

YEAR

March

2013

TO: Hydrometeorological Information Center, W/OH2
NOAA / National Weather Service
1325 East West Highway, Room 7230
Silver Spring, MD 20910-3283

SIGNATURE

Alan E. Gerard, Meteorologist In-Charge

DATE

04/18/2013

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐

An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

The majority of the Hydrologic Service Area (HSA) had below normal rainfall during March. Rainfall ranging from near normal to in excess of 150 percent of normal occurred north of a line from Washington County, MS to the Jackson Metro Area to Kemper County, MS. The remainder of the HSA had below normal rainfall ranging from 25 to 90 percent of normal. The driest regions were in Northeast Louisiana and Southeast Mississippi. At ASOS sites, rainfall ranged from 3.35 inches below normal at Hattiesburg, MS to 1.51 inches above normal at Greenwood, MS. March was an unseasonably cool month with mean temperatures at ASOS sites ranging from 4.7 degrees below normal at Jackson and Vicksburg/Tallulah to 6.5 degrees below normal at Greenwood (4th coolest March on record).

The month began with cold surface high pressure across the region. A weak upper level disturbance pushed across the area on the 2nd bringing some light snow flurries to areas along and north of I-20. By the 4th, southerly flow began to warm the region just ahead of a developing system over the mid-section of the country. A cold front moved rapidly across the HSA on the 5th. Rainfall from 0.25 to 0.50 inches occurred across the northeast counties and Grenada County; elsewhere, rainfall was light and scattered. Cool high pressure moved into the area and remained across the region through the 8th. On the 9th, high pressure shifted east allowing a warm up.

Another cold front moved across the area from the 10th into the early hours of the 11th. The heaviest rainfall occurred along and southeast of the Natchez Trace where amounts ranged from 1.00 to 3.50 inches. Northeast Louisiana and much of Southeast Arkansas had less than 0.50 inches while remaining areas northwest of the Natchez Trace had from 1.00 to 1.50 inches. High pressure moved into the region on the 11th bringing unseasonable cold temperatures through the morning of 15th. High pressure shifted eastward allowing a warming trend from the 15th through the 17th.

A cold front moved across the HSA on the 18th. A series of severe thunderstorms dropped very large hail in wide swaths across the region. The

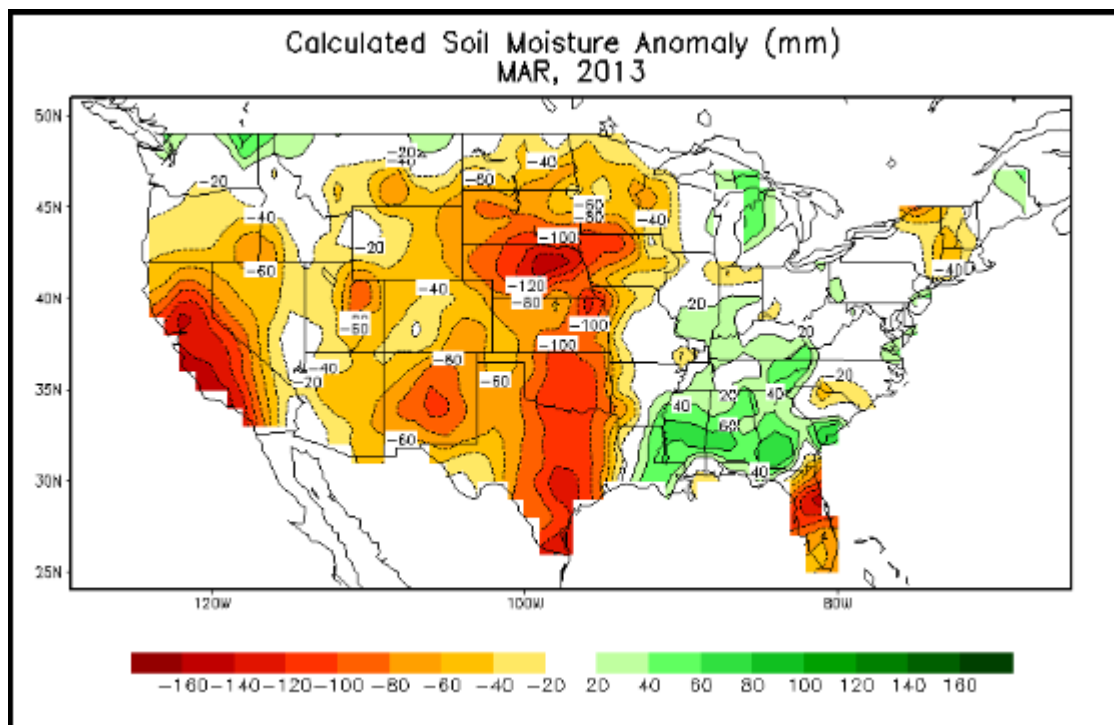
largest hail reported in the HSA was softball size in Clinton, MS. This was the 7th largest hailstone to fall in the state of Mississippi. The same storm produced very large hail in a long path from Crossett, AR to North Vicksburg to the Jackson Metro area to Jones County in Southeast Mississippi. Golf ball size hail or larger was reported across many counties and parishes causing significant damage to automobiles and buildings and at least one significant injury. Light to moderate rainfall was widespread across the region. The heaviest rainfall, from 0.50 to 1.50 inches, occurred with supercell thunderstorms that moved from northwest to southeast across the HSA. Remaining areas had rainfall from 0.75 inches or less. High pressure moved in through the 21st.

High pressure shifted east as a low pressure center moved into North Texas on the 22nd allowing some light showers to form across areas north of I-20. The low moved into Louisiana on the morning of the 23rd and across South Mississippi during the late afternoon and evening hours. There were isolated severe storms on the evening of the 22nd. The brunt of the severe weather occurred from the afternoon of the 23rd into the very early morning hours of the 24th. Several of the storms produced golf ball size hail. One storm cluster moved along the Louisiana/Arkansas line to near Belzoni, MS producing baseball size hail. Significant wind damage occurred with this storm as well. Rainfall storm totals from 1.00 to 5.00 inches occurred across areas north of I-20. Areas south of I-20 had rainfall totals less than 0.75 inches. High pressure moved into the HSA on the 24th bringing cold Canadian air. Much of the HSA had below freezing low temperatures through the morning of the 27th.

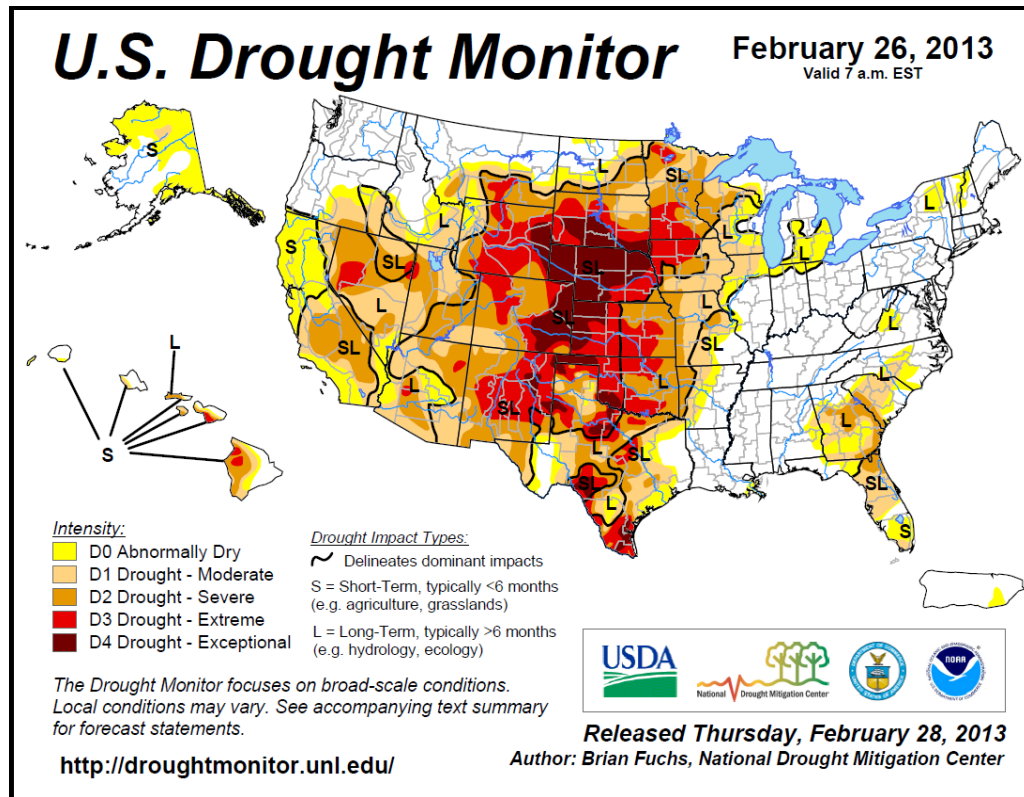
High pressure shifted eastward on the 28th and 29th allowing a southerly flow and a modest warming. On the 30th, a stationary front was positioned across the Highway 82 Corridor. An upper level disturbance moved across the region during the afternoon hours. Rainfall from 0.25 to 1.50 inches fell across Northeast Louisiana, Southeast Arkansas, West and North Mississippi. Little to no rainfall fell elsewhere. A line of thunderstorms moved across the HSA during the afternoon and early evening hours of the 31st. Some wind damage occurred across Northeast Louisiana and Southwest Mississippi. Rainfall amounts ranged from 0.25 to 1.50 inches across the HSA.

River and Soil Conditions...

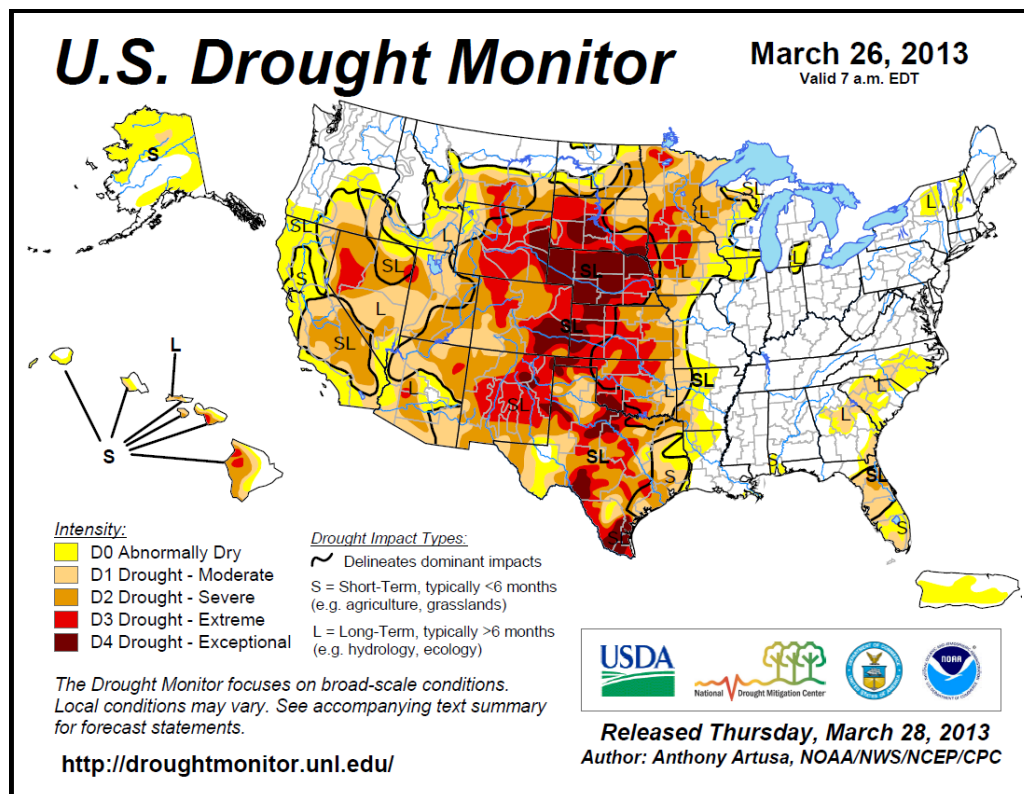
Soil Moisture Map:



Drought Comparison to prior month:



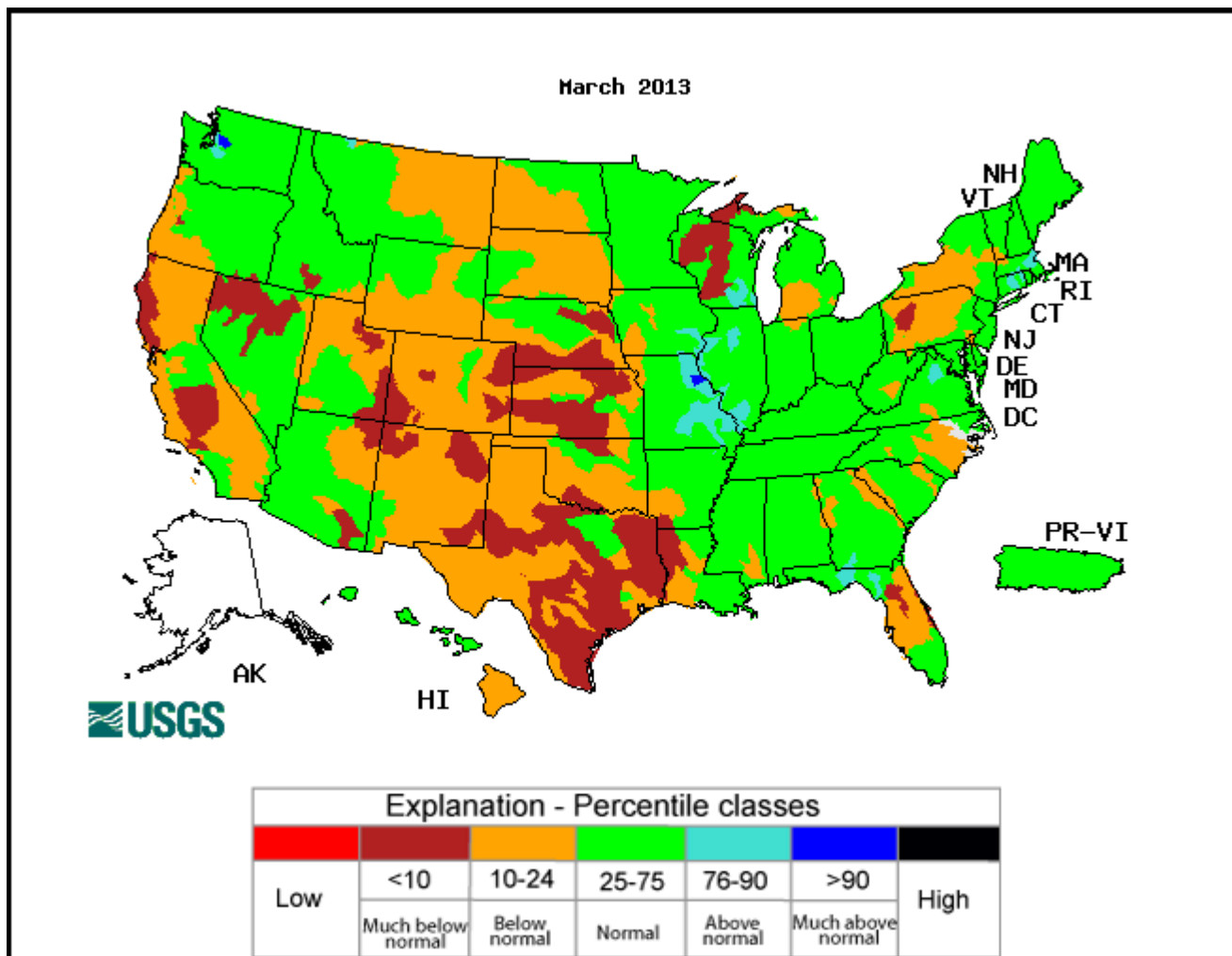
February 26th, 2013



March 26, 2013

Streamflow:

The United States Geological Survey's (USGS) March 2013 river streamflow records were compared with all historical March streamflow records. Streamflow ranged from below normal in the Leaf River System to much above normal across the remainder of the HSA.



March 2013 Streamflow

River Conditions and flood potential:

During the month, minor flooding occurred along the Upper Pearl River, Tuscolameta Creek, Yockanookany River, Upper Big Black River, Yalobusha River, and Tibbee Creek. Minor to moderate rises occurred along other river systems.

River stages on the Mississippi River remained fairly steady for first half of the month followed by a minor rise through much of the remainder of the month.

The climatic outlook for the next 3 months shows above normal temperatures while rainfall should trend to below normal in Southeast Mississippi with equal chances for either above or below normal rainfall across the remainder of the HSA. Rainfall outlook for next 3 months across the Upper Mississippi River Valley and portions of the Ohio River Valley shows is above normal.

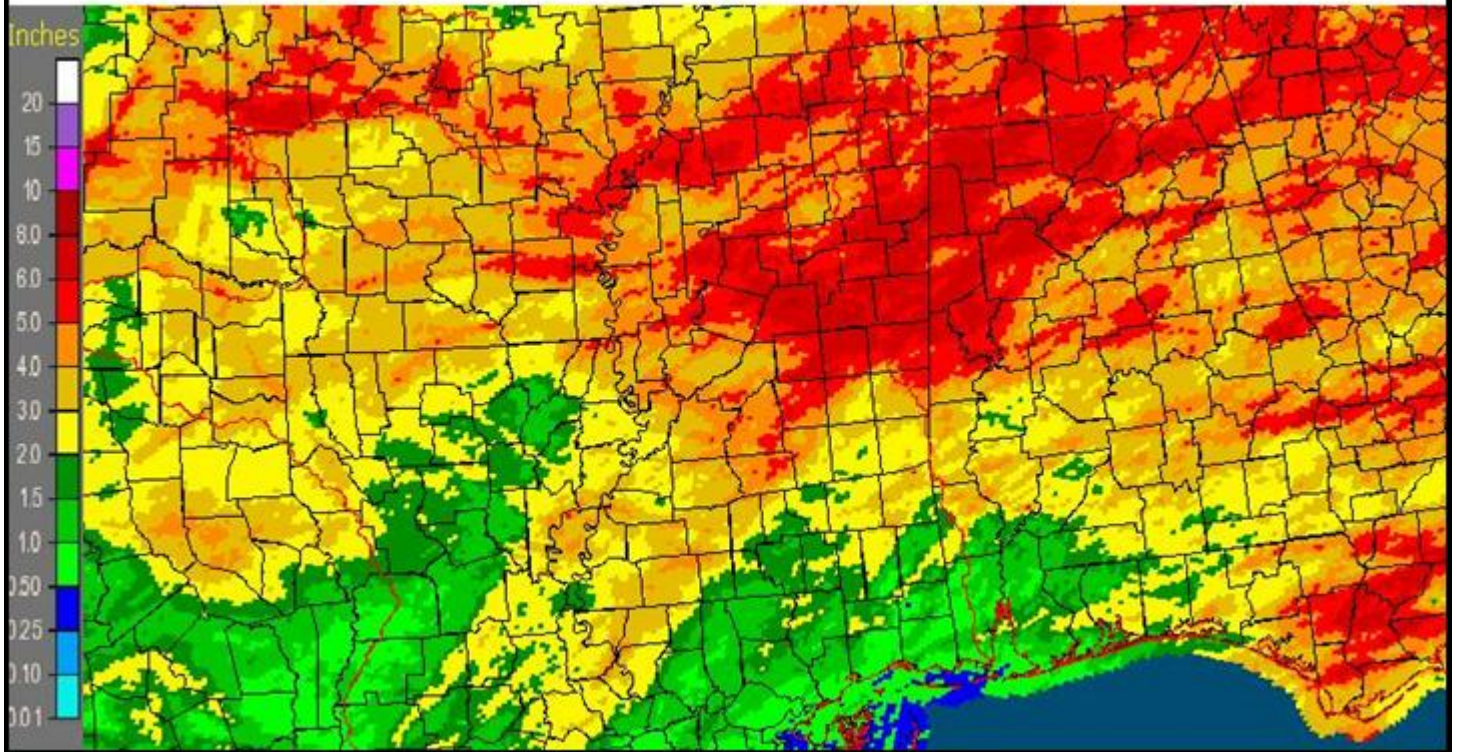
Based on current soil moisture, streamflow, and the 3 month weather outlooks, flood potentials are as follows:

<i>Pearl River System:</i>	Above Average.
<i>Yazoo River System:</i>	Average.
<i>Big Black River System:</i>	Above Average.
<i>Homochitto River System:</i>	Average.
<i>Pascagoula River System:</i>	Average.
<i>Northeast LA and Southeast AR:</i>	Average.
<i>Tombigbee River System:</i>	Average.
<i>Mississippi River:</i>	Above Average.

Rainfall for the month of March:

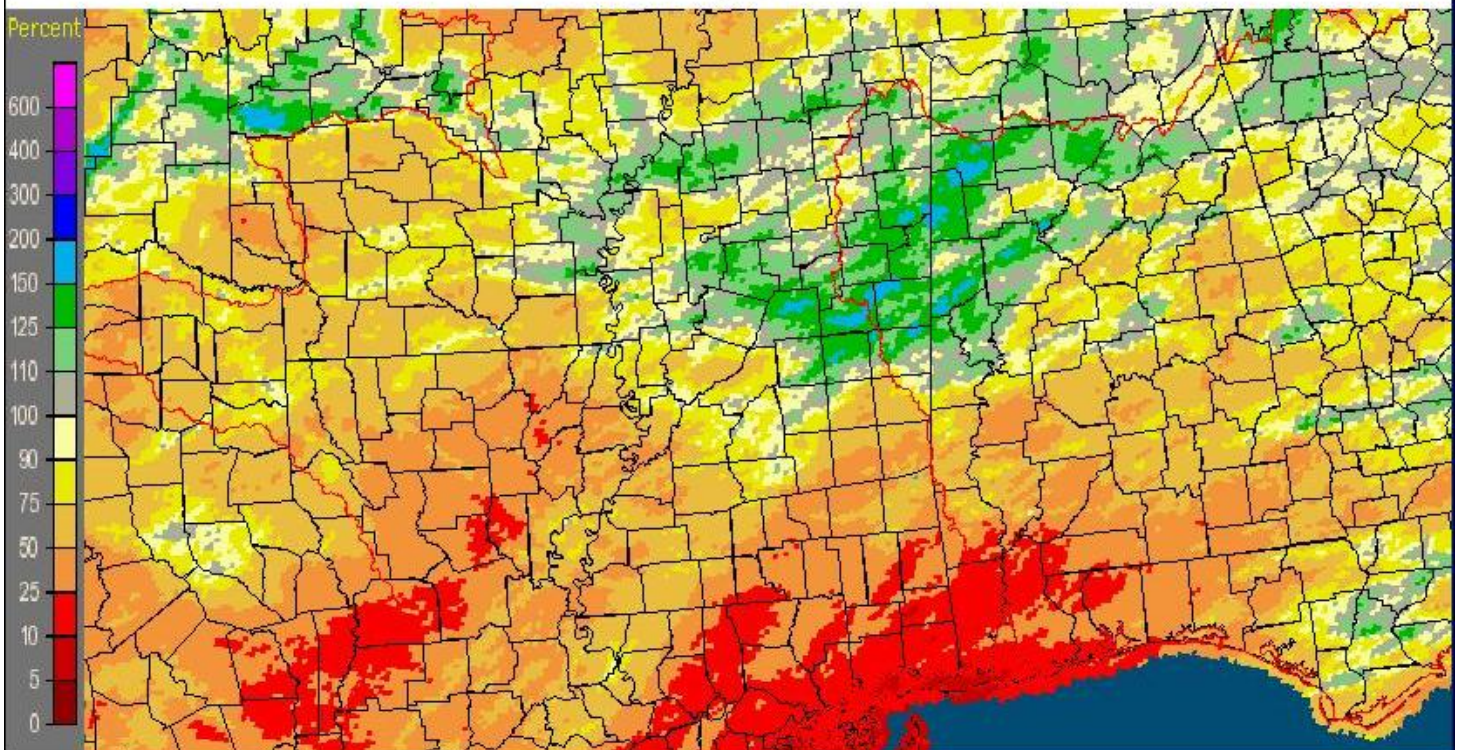
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on February 28th until 7 am on March 31st were: 7.48 inches at Columbus, MS; 7.40 inches at Louisville, MS; 7.18 inches at Elliot, MS; 7.15 inches at Kosciusko, MS; 6.89 inches at Mississippi State, MS; 6.36 inches at Vaiden, MS and 6.03 inches at Philadelphia, MS.

Mississippi: March, 2013 Monthly Observed Precipitation
Valid at 4/1/2013 1200 UTC- Created 4/3/13 19:45 UTC



March 2013 Rainfall Estimates

Mississippi: March, 2013 Monthly Percent of Normal Precipitation
Valid at 4/1/2013 1200 UTC- Created 4/3/13 19:55 UTC



March 2013 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

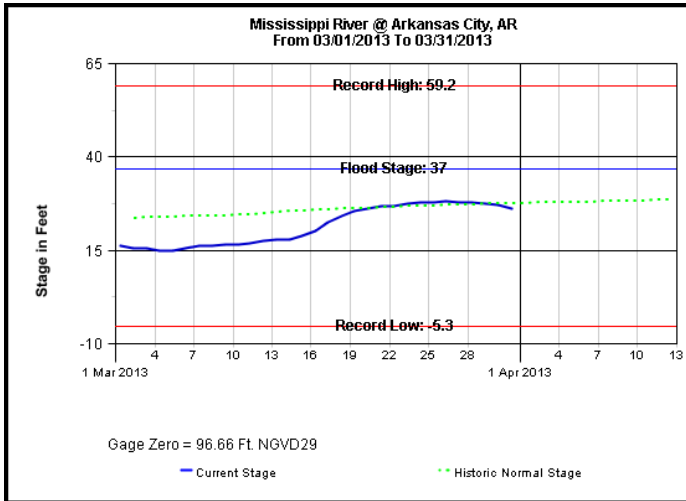
March rainfall for Selected Cities...

City (Airport)	March Rainfall	Departure from normal	2013 Rainfall	2013 Departure from Normal
Jackson, MS	5.59	+0.55	23.03	+8.26
Meridian, MS	3.75	-1.67	22.58	+6.43
Greenwood, MS	5.82	+1.51	18.28	+5.03
Greenville, MS	4.75	+0.20	17.21	+2.67
Hattiesburg, MS	2.15	-3.35	20.58	+3.95
Vicksburg, MS	2.96	-2.07	25.79	+10.42

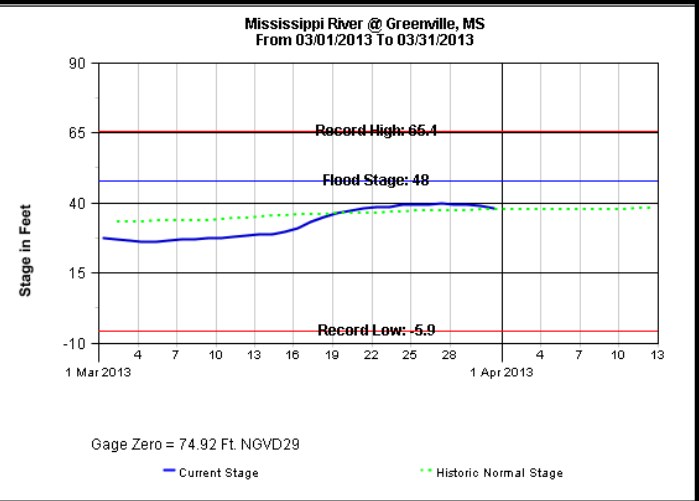
Mississippi River...

Mississippi River Plots for March, 2013

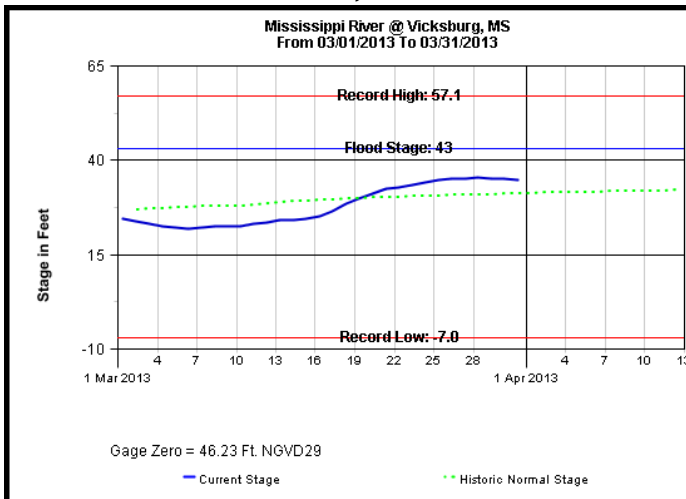
Plots Courtesy of the United States Army Corps of Engineers



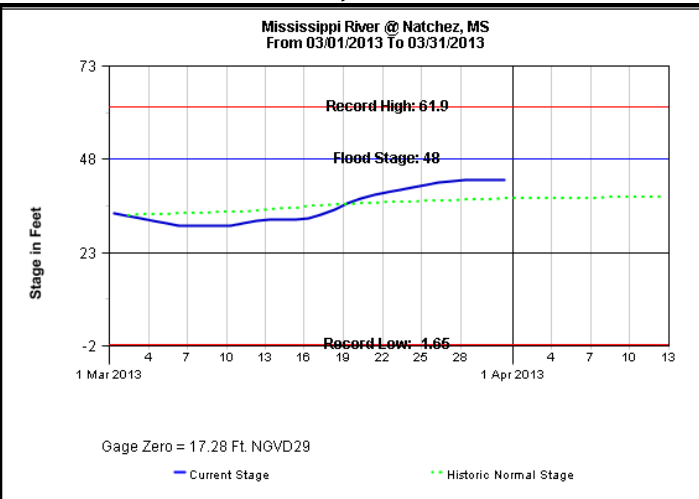
ARKANSAS CITY, AR



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City, AR	37	28.22	03/26/13	14.88	03/04/13
Greenville, MS	48	39.68	03/26/13	26.04	03/05/13
Vicksburg, MS	43	35.48	03/28/13	22.09	03/06/13
Natchez, MS	48	42.59	03/28/13	30.01	03/07/13

Total Flood Warning products issued: 13
Total Flood Statement products issued: 83
Total Flood Advisories MS River : 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

Marty V. Pope
Service Hydrologist &
Latrice Maxie
Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District